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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,274	03/16/2001	Yasumi Sago	K-1968	4972

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EXAMINER

ALEJANDRO MULERO, LUZ L

ART UNIT

PAPER NUMBER

1763

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H✓

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/809,274	SAGO ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Luz L. Alejandro	1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 4/17/06.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 6-7, 22-, 27-29 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 6,7,22 and 27-29 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION*****Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/17/06 has been entered.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 6-7 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Lenz et al., US 5,569,356 in view of Lilleland et al., U.S. Patent 6,073,577.

Lenz et al. shows the invention as claimed including a plasma-enhanced processing apparatus comprising: a process chamber for processing a substrate therein having a wall; a pumping system communicating with said process chamber for exhausting gas in the process chamber, a gas introduction system that introduces process gas into the process chamber; plasma-generation means that generates plasma in said process chamber by applying energy to said process gas; a substrate holder that holds said substrate in said process chamber; and an opposite electrode disposed in said process chamber to face said substrate held by said substrate holder, and including a front board 30 facing the substrate holder, a clamping plate 34 disposed at a front side of the front board close to the substrate holder so that an area of the front board not covered by the clamping plate is exposed to plasma, and a main body 32/40 installed on the wall of the process chamber and disposed at a back side of the front board opposite to the front side, so that said front board is clamped between the clamping plate and the main body, said clamping plate being fixed so that said clamping plate presses said front board toward the main body and a back surface of the front board is contacted and pressed uniformly onto the main body, the front board being fixed to the main body by pressure of the clamping plate toward the main body with no screw penetrating the front board (see, for example, fig. 2 and its description).

Lenz et al. is applied as above but does not expressly disclose a protector covering a front surface of the clamping plate and flush with the front board, so that the

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front surface of the clamping plate is not exposed to the plasma, and wherein said front board has a stepped portion at a periphery sandwiched by the main body and the clamping plate, the protector is located on the stepped portion and a front surface of the protector is on the same plane as the front surface of said front board. Lilleland et al. discloses a plasma apparatus comprising a protector 17 covering a front surface of a clamping plate 18 which is flush with a front board of an upper electrode 10 (see, fig. 1, and col. 4-line 49 to col. 8-line 18). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Lenz et al. so as to further comprise the claimed protector flush with the front board as taught by Lilleland et al. because this would effectively and efficiently limit the plasma damage to the upper electrode. Furthermore, note that the configuration of the claimed protector and the front board is a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed protector is significant (see *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Moreover, note that the apparatus of Lenz et al. modified by Lilleland et al. discloses an apparatus in which no projection is formed on the front surfaces of the front board and the protector both exposed to the plasma.

With respect to claim 7, note that the front board in Lenz et al. is made of single crystal silicon (see col. 5, lines 40-42).

Claims 22 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lenz et al., US 5,569,356 in view of Lilleland et al., U.S. Patent 6,073,577 as applied to claims 6-7 above, and further in view of Lee et al., U.S. Patent 6,379,491.

Lenz et al. and Lilleland et al. are applied as above but do not expressly disclose a protector covering heads of the screws so that the heads of the screws are not exposed to the plasma, wherein the protector is made of quartz. Lee et al. discloses screws 130 with a quartz cap 140 thereon (see col. 1-line 66 to col. 2-line 4 and fig. 3). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Lenz et al. modified by Lilleland et al. so as to include protective quartz caps on the screws because in such a way the screws would be protected from the negative affects of the plasma.

Additionally, note that the configuration of the claimed protector, front board, and protector is a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed.

With respect to claim 27, note that the front board in Lenz et al. is made of single crystal silicon (see col. 5, lines 40-42).

### ***Response to Arguments***

Applicant's arguments with respect to claims 6-7, 22, and 27-29 have been considered but are not persuasive. Applicant argues that the configuration of the claimed protector/front board arrangement is not a matter of choice because applicant

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points out benefits to forming the protector flush with the front board in the specification. However, the examiner respectfully notes that a protector/front board arrangement whereby the front board is flush with the protector is shown by the secondary reference of Lilleland et al.. The configuration to which the examiner refers is directed more to the claimed stepped configuration of the front board, as claimed in now independent claims 6 and 22.

Applicant also argues that Lee et al. does not show the protector where it covers both a clamping plate and screws. However, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

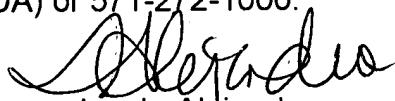
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luz L. Alejandro whose telephone number is 571-272-1430. The examiner can normally be reached on Monday to Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Luz L. Alejandro  
Primary Examiner  
Art Unit 1763

June 23, 2006